

DRAFT
Do Not Cite or Quote

**PROPOSED REGULATION FOR
DIESEL ENGINES ON COMMERCIAL HARBOR CRAFT**

(Note: The entire text of the sections set forth below is new language proposed to be added under two separate titles of the California Code of Regulations. To save paper, only proposed new section 2299.2, title 13, CCR, is shown below, but identical provisions will be added to title 17, section 93121, CCR, when ARB staff present both regulations to the Board for its consideration. Both new sections will be made available for public review and comment at least 45 days prior to the Board hearing).

Adopt new section 2299.2, title 13, California Code of Regulations (CCR), to read as follows:

13 CCR, section 2299.2. Emission Limits and Requirements for Commercial Harbor Craft.

(a) *Purpose.*

The purpose of this section is to reduce diesel particulate matter (PM) and oxides of nitrogen (NO_x) from diesel propulsion and auxiliary engines on commercial harbor craft that operate in any of the waters subject to this section ("Regulated California Waters").

(b) *Applicability.*

(1) Except as provided in subsection (c), this section applies to any person who sells, supplies, offers for sale, leases, charters, rents, purchases, owns or operates any new or in-use commercial harbor craft that operates in any of the Regulated California Waters, which include all of the following:

- (A) all California internal waters;
- (B) all California estuarine waters;
- (C) all California ports, roadsteads, and terminal facilities (collectively "ports");
- (D) all waters within 3 nautical miles of the California baseline, starting at the California-Oregon border and ending at the California-Mexico border at the Pacific Ocean, inclusive;
- (E) all waters within 12 nautical miles of the California baseline, starting at the California-Oregon border and ending at the California-Mexico border at the Pacific Ocean, inclusive;
- (F) all waters within 24 nautical miles of the California baseline, starting at the California-Oregon border to 34.43 degrees North, 121.12 degrees West; inclusive; and
- (G) all waters within the area, not including any islands, between the California baseline and a line starting at 34.43 degrees North, 121.12 degrees West; thence to 33.50 degrees North, 118.58 degrees West; thence to 32.48

DRAFT
Do Not Cite or Quote

degrees North, 117.67 degrees West; and ending at the California-Mexico border at the Pacific Ocean, inclusive.

“Commercial harbor craft” includes, but is not limited to, marine vessels such as ferries and tug, tow, work, pilot, crew, commercial fishing, and passenger fishing boats.

- (2) If a commercial harbor craft and its engine(s) are subject to the requirements of this section, the regulation for portable compression ignition (CI) engines and equipment (sections 93116-93116.5, title 17, CCR), and the regulation for off-road CI engines and equipment (sections 2420-2427, title 13, CCR), the requirements of this section shall supersede those of the other two regulations for all engines on the vessel that are permanently affixed to the vessel (i.e., welded to the vessel or otherwise physically connected to the vessel in a way so that the engine cannot be easily removed for use in a land-based application without modifications).
 - (3) Except as provided in subsection (c), this section applies to tow and tug boats engaged in or intending to engage in the service of pulling, pushing or hauling along side tank vessels or tank barges, or any combination of pulling, pushing, or hauling along side such tank vessels or tank barges.
 - (4) Except as provided in subsection (c), this section applies to all commercial harbor craft that are flagged in, registered in, entitled to fly the flag of, or otherwise operating under the authority of the United States (“U.S.-flagged”) or any other country (“foreign-flagged”).
 - (5) Nothing in this section shall be construed to amend, repeal, modify, or change in any way any other applicable State, U.S. Coast Guard, or other federal requirements. Any person subject to this section shall be responsible for ensuring compliance with both U.S. Coast Guard regulations and the requirements of this section and any other applicable State and federal requirements, including but not limited to, obtaining any necessary approvals, exemptions, or orders from the U.S. Coast Guard.
- (c) *Exemptions.*

The requirements of this section do not apply to any of the following, which may be subject to other State and federal regulations and requirements:

- (1) recreational vessels;
- (2) ocean-going vessels;
- (3) registered historical vessels;
- (4) low-use auxiliary engines;
- (5) low-use propulsion engines;
- (6) low-use engines used for both propulsion and auxiliary power;

DRAFT
Do Not Cite or Quote

- (7) engines using alternative fuels exclusively; and
 - (8) military tactical support vessels.
- (d) *Definitions.*

For purposes of this section, the definitions of Health and Safety Code sections 39010 through 39060 shall apply except to the extent that such definitions may be modified by the following definitions that apply specifically to this regulation:

- (1) "Alternative Diesel Fuel" means any fuel used in a diesel engine that is not commonly or commercially known, sold, or represented by the supplier as diesel fuel No. 1-D or No. 2-D, pursuant to the specifications in ASTM D975-81, "Standard Specification for Diesel Fuel Oils," as modified in May 1982, which is incorporated herein by reference, or an alternative fuel, and does not require engine or fuel system modifications for the engine to operate, although minor modifications (e.g., recalibration of the engine fuel control) may enhance performance. Examples of alternative diesel fuels include, but are not limited to, biodiesel and biodiesel blends not meeting the definition of CARB diesel fuel; Fischer-Tropsch fuels; emulsions of water in diesel fuel; and fuels with a fuel additive, unless:
 - (A) the additive is supplied to the engine fuel by an on-board dosing mechanism, or
 - (B) the additive is directly mixed into the base fuel inside the fuel tank of the engine, or
 - (C) the additive and base fuel are not mixed until engine fueling commences, and no more additive plus base fuel combination is mixed than required for a single fueling of a single engine.
- (2) "Alternative Fuel" means natural gas, propane, ethanol, methanol, gasoline (when used in hybrid electric commercial harbor craft only), hydrogen, electricity, fuel cells, or other technologies that do not meet the definition of CARB diesel or alternative diesel fuel. "Alternative fuel" also means any mixture that only contains these fuels.
- (3) "Auxiliary Engine" means an engine designed primarily to provide power for uses other than propulsion.
- (4) "Averaging" means the exchange of emissions among engines under a given owner or operator's direct control **[NEEDS FURTHER REVIEW]**
- (5) "Baseline" or "Baseline Emissions" means the emissions level of a diesel engine using CARB diesel fuel as configured upon initial marine installation.

DRAFT
Do Not Cite or Quote

- (6) "California Air Resources Board (CARB) Diesel Fuel" means any diesel fuel that meets the specifications of vehicular diesel fuel, as defined in title 13 CCR, sections 2281, 2282, and 2284.
- (7) "Carbon Monoxide (CO)" is a colorless, odorless gas resulting from the incomplete combustion of hydrocarbon fuels.
- (8) "Certified engine" means an engine that meets U.S. EPA or CARB marine compression ignition engine emission standards. [EPA citation]
- (9) "Commercial Harbor Craft" means any private, commercial, government, or military marine vessels including, but not limited to, passenger ferries, tugboats, towboats, push-boats, commercial fishing boats, commercial passenger fishing vessels (sport fishing vessels), crew boats, work boats, pilot boats, supply boats, research vessels, United States Coast Guard vessels, hovercraft, emergency response harbor craft, recreational vessels, or registered historic vessels and barge vessels that do not otherwise meet the definition of ocean-going ships.
- (10) "Crew Vessel" means a self-propelled vessel used for carrying personnel to and from off-shore and in-harbor locations (including, but not limited to, off-shore work platforms, construction sites, and other vessels).
- (11) "Diesel Engine" means an internal combustion, compression-ignition (CI) engine with operating characteristics significantly similar to the theoretical diesel combustion cycle. The regulation of power by controlling fuel supply in lieu of a throttle is indicative of a compression ignition engine.
- (12) "Diesel Fuel" means any fuel that is commonly or commercially known, sold, or represented by the supplier as diesel fuel, including any mixture of primarily liquid hydrocarbons (HC) - organic compounds consisting exclusively of the elements carbon and hydrogen - that is sold or represented by the supplier as suitable for use in an internal combustion, compression-ignition engine.
- (13) "Diesel-Fueled" means a diesel engine fueled in whole or part by diesel fuel, CARB diesel fuel, or jet fuel.
- (14) "Diesel Oxidation Catalyst (DOC)" means a catalyst promoting oxidation processes in diesel exhaust, and usually designed to reduce emissions of the organic fraction of diesel particulates, gas-phase HC, and CO.
- (15) "Diesel Particulate Filter (DPF)" means an emission control technology that reduces diesel PM emissions by trapping the particles in a flow filter substrate and periodically removes the collected particles by either physical action or by oxidizing (burning off) the particles in a process called regeneration.

DRAFT
Do Not Cite or Quote

- (16) "Diesel Particulate Matter (Diesel PM)" means the particles found in the exhaust of diesel engines, which may agglomerate and adsorb other species to form structures of complex physical and chemical properties.
- (17) "Emission Control Strategy" means any device, system, or strategy employed to reduce emissions from a diesel engine, including, but not limited to, diesel oxidation catalysts, selective catalytic reduction systems, diesel particulate filters, alternative diesel fuels, water emulsified fuels, and any combination of the above.
- (18) "Estuarine Waters" means an arm of the sea or ocean that extends inland to meet the mouth of a river.
- (19) "Excursion Vessels" means any vessel owned, controlled, operated, or managed for public use in the transportation of persons or property.
- (20) "Executive Officer" means the Executive Officer of the California Air Resources Board or his/her designee.
- (21) "Ferry" means a boat or a ship carrying passengers, and sometimes their vehicles, on scheduled services.
- (22) "Fishing Vessel" means a boat or ship engaged in the activity of fishing and producing fish and other seafood products.
- (23) "Fleet" means the total number of commercial harbor craft owned, rented, or leased by a single owner or operator.
- (24) "Fuel Additive" means any substance designed to be added to fuel or fuel systems or other engine-related engine systems such that it is present in-cylinder during combustion and has any of the following effects: decreased emissions, improved fuel economy, increased performance of the engine; or assists diesel emission control strategies in decreasing emissions, or improving fuel economy or increasing performance of the engine.
- (25) "Hydrocarbon (HC)" means the sum of all hydrocarbon air pollutants.
- (26) "In-Use" or "Used" means a diesel engine or commercial harbor craft that is not a "new" diesel engine or commercial harbor craft.
- (27) "Lease" means a contract by which one conveys commercial harbor craft(s) or diesel engine(s) on a commercial harbor craft for a specified term and for a specified rent.
- (28) "Level" means one of three categories of Air Resources Board-verified diesel emission control strategies as set forth in title 13, CCR, section 2701 et seq.: Level 1 means the strategy reduces engine diesel particulate matter emissions

DRAFT
Do Not Cite or Quote

by between 25 and 49 percent, Level 2 means the strategy reduces engine diesel particulate matter emissions by between 50 and 84 percent, and Level 3 means the strategy reduces engine diesel particulate matter emissions by 85 percent or greater, or reduces engine emissions to less than or equal to 0.01 grams diesel PM per brake horsepower-hour.

- (29) "Low-Use" means operation of an engine for no than 300 hours per calendar year.
- (30) "Marine Vessel" has the same definition as provided in Health and Safety Code section 39037.1.
- (31) "Military Tactical Support" means a vessel that meets military specifications, is owned by the U.S. Department of Defense and / or the U.S. Military services or its allies, and is used in combat, combat support, combat services support, tactical or relief operations or training for such operations.
- (32) "Model Year" means the diesel engine manufacturer's annual production period, which includes January 1st of a calendar year, or if the manufacturer has no annual production period, the calendar year.
- (33) "New Commercial Harbor Craft" means:
 - (A) A commercial harbor craft, the equitable or legal title to which has never been transferred to an ultimate purchaser.
 - (B) Where the equitable or legal title to a commercial harbor craft is not transferred to an ultimate purchaser prior to its being placed into service, the commercial harbor craft ceases to be new after it is placed into service.
 - (C) With respect to imported commercial harbor craft, the term "new commercial harbor craft" means a commercial harbor craft that is not covered by a certificate of conformity under this part at the time of importation, and that was manufactured after the starting date of the emission standards in this part which are applicable to such commercial harbor craft (or which would be applicable to such commercial harbor craft had it been manufactured for importation into California). **[NEEDS FURTHER REVIEW]**
- (34) "New Marine Engine" means:
 - (A) (i) A marine engine, the equitable or legal title to which has never been transferred to an ultimate purchaser;

DRAFT
Do Not Cite or Quote

- (ii) A marine engine installed on a vessel, the equitable or legal title to such vessel has never been transferred to an ultimate purchaser; or
 - (iii) A marine engine that has not been placed into service on a vessel.
 - (B) Where the equitable or legal title to an engine or vessel is not transferred to an ultimate purchaser prior to its being placed into service, the engine ceases to be new after it is placed into service.
 - (C) With respect to imported engines, the term “new marine engine” means an engine that is not covered by a certificate of conformity under this part at the time of importation, and that was manufactured after the starting date of the emission standards in this part which are applicable to such engine (or which would be applicable to such engine had it been manufactured for importation into California). **[NEEDS FURTHER REVIEW]**
- (35) “Nitrogen Oxides (NO_x)” means compounds of nitric oxide (NO), nitrogen dioxide (NO₂), and other oxides of nitrogen, which are typically created during combustion processes and are major contributors to smog formation and acid deposition.
- (36) “Non-Methane Hydrocarbons (NMHC)” means the sum of all hydrocarbon (HC) air pollutants except methane.
- (37) “Non-Profit Organization” means **[NEEDS FURTHER REVIEW]**
- (38) “Ocean-going Vessel” means a commercial, government, or military vessel meeting any one of the following criteria:
- (A) a vessel with a “registry” (foreign trade) endorsement on its United States Coast Guard certificate of documentation, or a vessel that is registered under the flag of a country other than the United States;
 - (B) a vessel greater than or equal to 400 feet in length overall (LOA) as defined in 50 CFR § 679.2, as adopted June 19, 1996;
 - (C) a vessel greater than or equal to 10,000 gross tons (GT ITC) per the convention measurement (international system) as defined in 46 CFR 69.51-.61, as adopted September 12, 1989; or
 - (D) a vessel propelled by a marine compression ignition engine with a per-cylinder displacement of greater than or equal to 30 liters.
- (39) “Operate” means steering or otherwise running the vessel or its functions while the vessel is underway, moored, anchored, or at dock.

DRAFT
Do Not Cite or Quote

- (40) “Own” means having all the incidents of ownership, including the legal title, or a vessel whether or not that person lends, rents, or pledges the vessel; having or being entitled to the possession of a vessel as the purchaser under a conditional sale contract; or being the mortgagor of a vessel.
- (41) “Particulate Matter (PM)” means any airborne finely divided material, except uncombined water, which exists as a liquid or solid at standard conditions (e.g., dust, smoke, mist fumes, or smog).
- (42) “Person” includes all of the following:
 - (B) any person, firm, association, organization, partnership, business trust, corporation, limited liability company, or company;
 - (C) any state or local governmental agency or public district, or any officer or employee thereof; and
 - (D) the United State or its agencies, to the extent permitted by federal law.
- (43) “Pilot Vessel” means a vessel designed for, but not limited to, the transfer and transport of maritime pilots to and from ocean going vessels while such vessels are underway.
- (44) “Pilot Ignition Engine” means an engine designed to operate using an alternative fuel, except that diesel fuel is used for pilot ignition.
- (45) “Portable CI Engine” means a compression ignition (CI) engine designed and capable of being carried or moved from one location to another. Indicators of portability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform. Portable engines are not self-propelled.
- (46) “Port” means any facility used for water-borne commerce. “Port” includes facilities also known as “marine terminals” and “roadsteads.”
- (47) “Propulsion Engine” means an engine that moves a vessel through the water or directs the movement of a vessel.
- (48) “Purchase Date” means the date shown on the front of the cashed check, the date of the financial transaction, or the date on the engine or commercial harbor craft purchase, rental, or lease agreement, whichever is earliest.
- (49) “Recreational Vessel” means a vessel that is being used only for pleasure.
- (50) “Registered Historic Vessel” means a vessel listed in the National Register of Historic Places with a local, regional, national, or international level of significance. **[FURTHER REVIEW]**

DRAFT
Do Not Cite or Quote

- (51) “Regulated California Waters” means all of the following:
- (A) all California internal waters;
 - (B) all California estuarine waters;
 - (C) all California ports, roadsteads, and terminal facilities (collectively “ports”);
 - (D) all waters within 3 nautical miles of the California baseline, starting at the California-Oregon border and ending at the California-Mexico border at the Pacific Ocean, inclusive;
 - (E) all waters within 12 nautical miles of the California baseline, starting at the California-Oregon border and ending at the California-Mexico border at the Pacific Ocean, inclusive;
 - (F) all waters within 24 nautical miles of the California baseline, starting at the California-Oregon border to 34.43 degrees North, 121.12 degrees West; inclusive; and
 - (G) all waters within the area, not including any islands, between the California baseline and a line starting at 34.43 degrees North, 121.12 degrees West; thence to 33.50 degrees North, 118.58 degrees West; thence to 32.48 degrees North, 117.67 degrees West; and ending at the California-Mexico border at the Pacific Ocean, inclusive.
- (52) “Rent” means payment for the use of commercial harbor craft or diesel engine for a specified term.
- (53) “Retirement” or “Retire” means an engine or commercial harbor craft that will be taken out of service by an owner or operator and will not be operated in any of the Regulated California Waters. The engine or commercial harbor craft may be sold outside of California or scrapped, but an engine or commercial harbor craft that is sold outside California then subsequently operated in any of the Regulated California Waters has not been “retired.”
- (54) “Supply Vessel” means a self-propelled vessel used for carrying supplies to and from off-shore and in-harbor locations including, but not limited to, off-shore work platforms, construction sites, and other vessels.
- (55) “Tank Barge” means a non-self-propelled vessel constructed or adapted primarily to carry, or that carries, oil or hazardous material in bulk as cargo or cargo residue.
- (56) “Tank Vessel” or “Tanker” means a self-propelled vessel constructed or adapted primarily to carry, or that carries, oil or hazardous material in bulk as cargo or cargo residue.
- (57) “Tier 0 Marine Engine” means an engine that is not certified to meet at least U.S. EPA Tier 1 Marine Emission Standards.

DRAFT
Do Not Cite or Quote

- (58) "Tier 1 Marine Emission Standards" means the emission standards specified in MARPOL Annex VI NOx limits for vessels constructed after January 1, 2000 over 130kW. *[ARB staff needs to clarify]*
- (59) "Tier 2 Marine Emission Standards" means the emission standards promulgated by the United States Environmental Protection Agency (U.S. EPA) in "Control of Emissions of Air Pollution from New Marine Compression-Ignition Engines at or Above 37 kW; Final Rule" (Vol. 64 No. 249 Fed.Reg. pp.73300-73373, December 29, 1999), which is incorporated herein by reference.
- (60) "Towboat" means any vessel engaged in or intending to engage in the service of pulling, pushing or hauling along side barges, or any combination of pulling, pushing, or hauling along side such barges.
- (61) "Tugboat" means any vessel engaged in or intending to engage in the service of pulling, pushing or hauling along side other vessels, or any combination of pulling, pushing, or hauling along side such vessels in harbors, over the open sea, or through rivers and canals.
- (62) "Verification Procedure, Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emissions from Diesel Engines (Verification Procedure)" means the Air Resources Board (ARB) regulatory procedure codified in title 13, CCR, sections 2700-2710, which is incorporated herein by reference, that engine manufacturers, sellers, owners, or operators may use to verify the reductions of diesel PM or NOx from in-use diesel engines using a particular emission control strategy.
- (63) "Verified Diesel Emission Control Strategy (VDECS)" means an emission control strategy, designed primarily for the reduction of diesel PM emissions, which has been verified pursuant to the "Verification Procedure for In-Use Strategies to Control Emissions from Diesel Engines" in title 13, California Code of Regulations, commencing with section 2700.
- (64) "Work Vessel" means a self-propelled vessel that performs duties such as fire/rescue, law enforcement, hydrographic surveys, spill/response, research, training, and construction (including drilling) vessels.
- (e) *Requirements.*
- (1) *Diesel Fuel Used in All Commercial Harbor Craft:*

As of January 1, 2006, except as provided in subsection (c), no owner or operator of commercial harbor craft shall fuel the diesel engine(s) with any fuel unless the fuel is one of the following:

- (A) CARB Diesel Fuel; or
- (B) an alternative diesel fuel that is:

DRAFT
Do Not Cite or Quote

- i. biodiesel;
- ii. a biodiesel blend;
- iii. a Fischer-Tropsch fuel;
- iv. an emulsion of water in diesel fuel; or
- (C) any alternative diesel fuel that is not identified in (e)(1)(B) above and meets the requirements of the Verification Procedure; or
- (D) CARB Diesel Fuel used with fuel additives that meets the requirements of the Verification Procedure; or
- (E) any combination of (e)(1)(A) through (D) above.

(2) *Installation of Non-resettable Hour Meters:*

On or before January 1, 2008, a non-resettable hour meter must be installed on each diesel engine on all commercial harbor craft that operate in Regulated California Waters.

(3) *Sales of Engines for Use on Commercial Harbor Craft:*

On or after January 1, 2008, no person shall sell, offer for sale, lease, rent, import, or deliver a diesel engine for use in commercial harbor craft that operate in any of the Regulated California Waters unless the engine meets U.S. EPA Marine Emission Standards for the purchase year by power, cylinder displacement.

- (A) **Sell-Through Provision.** A new engine manufactured prior to implementation of new engine emission standards, which does not meet those emission standards, may be sold, supplied, or offered for sale for use in commercial harbor craft in any of the Regulated California Waters for up to 6 months after the implementation date.

(4) *Sales of New Commercial Harbor Craft:*

Except as provided in subsection (c), on or after January 1, 2009, no person shall sell, offer for sale, lease, rent, import, or deliver a new commercial harbor craft for use in any of the Regulated California Waters unless each of the diesel engines on the vessel meets the U.S. EPA Marine Emission Standards applicable on the purchase date.

(5) *Sales of In-Use Commercial Harbor Craft:*

Except as provided in subsection (c), on or after January 1, 2008, no person shall sell, offer for sale, lease, rent, import, or deliver an in-use commercial harbor craft for use in any of the Regulated California Waters unless the vessel and its engines meet the provisions of this section.

(6) *Donations of Commercial Harbor Craft to a Non-Profit Organization:*

DRAFT
Do Not Cite or Quote

Except as provided in subsection (c), on or after January 1, 2008, a non-profit organization that receives a donated commercial harbor craft for use in any of the Regulated California Waters shall meet the performance standards for owners and operators of in-use fishing vessels, as described in subsection (e)(9).

(7) *Commercial Harbor Craft Used as a Fishing and Non-Fishing Vessel:*

Multipurpose commercial harbor craft that work as a fishing vessel and non-fishing vessel shall meet the performance standards for owners and operators of commercial harbor craft not used exclusively as a fishing vessel, as described in subsection (e)(8). Total annual hours of operation will be used to determine the applicable compliance date.

(8) *Performance Standards For Owners or Operators of In-Use Commercial Harbor Craft Not Used Exclusively as Fishing Vessels.*

(A) Compliance Options :

Except as provided in subsection (c), on or after January 1 of the applicable compliance year specified in Table 1, no owner or operator shall operate in any of the Regulated California Waters an in-use commercial harbor craft that is not used exclusively as a fishing vessel unless the owner or operator meets one of the options for each diesel engine on the vessel as set forth below:

1. Option 1: Replace the existing engine with a certified marine engine that meets the applicable U.S. EPA Marine Emissions Standard for power, cylinder displacement, and model year; or

(i) [Address engines rebuilt to Tier 1 Marine Emission Standards]

2. Option 2: Demonstrate to the Executive Officer that each engine meets the applicable U.S. EPA Marine Emissions Standard for power, cylinder displacement, and model year using the test method specified in section (k) or through an alternative method approved by the Executive Officer.

Table 1: Compliance Dates for In-Use Commercial Harbor Craft Not Used Exclusively as Fishing Vessels

Annual Hours of Operation	All Non-Fishing Vessels			
	Engine Model Year pre-1975	Engine Model Year 1976-1989	Engine Model Year 1990-1999	Engine Model Year 2000-2006
>300 – <1500	2009	2011	2012	2014
=1500	2008	2010	2011	2013

DRAFT
Do Not Cite or Quote

For example, if you operate a tugboat in California for 750 hours per year, and the boat has a 1982 model year diesel engine, you must use Option 1 or 2 by January 1, 2011. You arrive at this by going down the column representing your engine's model year (1982 model year engine) and going across the row representing your hours of operation (750 hours per year). Where the column and row meet is the compliance date by which you must meet either Option 1 or 2 (in this case, January 1, 2011).

(9) *Performance Standards For Owners or Operators of In-Use Fishing Vessels with Non-Certified Engines.*

Except as provided in subsection (c), on or after January 1 of the applicable compliance year specified in Table 2, no owner or operator shall operate in any of the Regulated California Waters an in-use commercial harbor craft as a fishing vessel with non-certified engine(s) unless the owner or operator meets one of the options for each diesel engine on the vessel as set forth below:

1. Option 1: Install a Level 1 or higher verified diesel emission control strategy (VDECS); or
2. Option 2: Provide documentation to the Executive Officer that demonstrates each engine achieves particulate matter (PM) emission reductions of 25% or more from uncontrolled engine emission levels using the test method in section (k) or through an alternative method approved by the Executive Officer.
3. Option 3: Provide documentation to the Executive Officer that demonstrates each engine emits equal to or less than U.S. EPA Tier 1 marine emission standards.

DRAFT
Do Not Cite or Quote

Table 2: Compliance Dates for In-Use-Fishing Vessels

Annual Hours of Operation	All In-Use Fishing Vessels			
	Engine Model Year pre-1975	Engine Model Year 1976-1989	Engine Model Year 1990-1999	Engine Model Year 2000-2006
>300 – <1500	2012	2014	2016	2018
=1500	2011	2013	2015	2017

For example, if you operate a fishing vessel in California for 750 hours per year, and the boat has a 1982 model year diesel engine, you must use Option 1 or 2 by January 1, 2014. You arrive at this by going down the column representing your engine's model year (1982 MY engine) and going across the row representing your hours of operation (750 hours per year). Where column the meets row is the compliance date by which you must apply either Option 1, 2 , or 3 (in this case, January 1, 2014).

(f) Compliance Extensions .

An owner or operator may be granted an extension by the Executive Officer to a compliance deadline specified in subsection (e) for one of the following reasons. If a compliance extension is granted by the Executive Officer, the owner or operator shall be deemed to be in compliance as specified by the Executive Officer's authorization. Unless specifically stated, compliance extensions may not be combined or used consecutively, and only one compliance extension type may be granted per engine or commercial harbor craft.

- (1) *Compliance Extension for an Engine Near Retirement.* If an owner or operator has applied a Compliance Option to its fleet pursuant to the schedule set forth in subsection (e), and the next engine subject to the Compliance Options is scheduled to be retired from the active fleet within one year of the applicable compliance deadline, the owner or operator does not need to apply a Compliance Option to that engine for up to one year, provided the owner or operator maintains appropriate records and documentation, as specified in subsections (i)(1) to (i)(6), regarding the assigned retirement date and the engine is retired on or before the assigned date. If upon inspection, ARB finds the aforementioned conditions to have not been met, the engine would be in noncompliance from the date that compliance would otherwise have been required under the schedule in subsection (e).
- (2) *Use of a Non-Verified Emission Control Strategies for Commercial Harbor Craft.* An annual compliance extension may be granted by the Executive Officer for the use of a non-verified, emission control strategy if a verified or experimental technology is not available or if the owner or operator can demonstrate that an existing verified technology is not feasible for their engines or application. The

DRAFT
Do Not Cite or Quote

owner or operator shall keep documentation of this use in records as specified in subsection (i)(1) through (i)(5). Each commercial harbor craft will be considered to be in compliance for the duration if the vessel owner or operator conducts annual source testing and provides documentation on each engine with a non-verified exhaust treatment installed. The owner or operator must keep the engines in compliance with yearly source testing of the engines and report back to the Executive Officer. The Executive Officer may grant the extension upon determining that the owner or operator has met the compliance extensions conditions.

- (3) *Compliance Extension for Changes in Hours of Operation, Sales, and Change of Ownership.* An owner or operator who changes hours of operation category, purchases, leases, rents, or changes ownership of a vessel or engine shall notify the Executive Officer and comply with this regulation according to reporting requirements in subsection (j)(4)
- (4) *Compliance Extension Based on No Verified Diesel Emission Control Strategy and No Suitable Engine Replacement for Commercial Harbor Craft.* If the Executive Officer has not verified a diesel emission control strategy or one is not commercially available for a particular engine, an annual extension in compliance, up to a maximum of two *[ARB staff is discussing length of extension]* years, may be granted by the Executive Officer. If there is no suitable engine replacement available for a particular engine, an extension in compliance may be granted by the Executive Officer. The Executive Officer shall grant the extension upon determining that the following circumstances have been met:
 - (A) The owner or operator has applied to the Executive Officer for a compliance extension for an engine six months prior to each compliance deadline specified in subsection (e) and provided sufficient documentation to meet the conditions set forth below. The owner or operator may, six-months prior to the expiration of the extension, apply for an additional one-year extension. In such a case, the owner or operator shall once again be required to show to the Executive Officer's satisfaction that the conditions set forth below have been met:
 - 1. The owner or operator must establish that it has applied a Compliance Option specified in subsection (e) to all applicable engines in its fleet for which a Compliance Option is feasible pursuant to the schedule set forth in subsection (e),
 - 2. Identify each engine for which an extension is requested by engine serial number; engine manufacturer, model year, family, and series; and commercial harbor craft name, for which a specific diesel emission control strategy would jeopardize the original engine warranty and a statement from the engine manufacturer or authorized dealer stating the original engine warranty would be jeopardized; or

DRAFT
Do Not Cite or Quote

3. Identify each engine and vessel combination for which an extension is requested by engine serial number; engine manufacturer, model year, family, and series; and commercial harbor craft name, for which no diesel emission control strategy is commercially available and a list of manufacturers that have been contacted with their responses to a request to purchase; or
 4. Identify each engine and vessel combination for which an extension is requested by engine serial number; engine manufacturer, model year, family, and series; and commercial harbor craft name, for which it is not suitable to replace the engine and documentation supporting this claim, including engineering arguments; and
 5. Describe the reason(s) for the request for a compliance extension for each engine or commercial harbor craft.
- (5) *Use of Experimental Diesel Particulate Matter Emission Control Strategies for Commercial Harbor Craft.* An annual compliance extension may be granted by the Executive Officer for the use of an experimental, or non-verified, diesel PM emission control strategy if a VDECS is not available or if the owner or operator can demonstrate that an existing VDECS is not feasible for their engines or application. The owner or operator shall keep documentation of this use in records as specified in subsection (i)(1) through (i)(5). Each commercial harbor craft will be considered to be in compliance for the duration of the experiment, until the extension expires. The owner or operator must bring the commercial harbor craft into compliance within six months of the end of the annual compliance extension. The Executive Officer may grant the extension upon determining that the owner or operator has met the conditions specified below:
- (A) The commercial harbor craft owner or operator has applied to the Executive Officer for a compliance extension six months prior to each compliance deadline, including annually if the owner or operator wishes to continue with the experimental controls. The application must include emissions data demonstrating the experimental control achieves at least a Level 1 diesel PM emission reduction using the test method described in subsection (k) through:
1. marine engine certification test data for the commercial harbor craft propulsion or auxiliary engine;
 2. engine manufacturer test data;
 3. emissions test data from a similar engine;
 4. emissions test data used in meeting the requirements of the Verification Procedure for the emission control strategy implemented; or
 5. emissions testing conducted under the following conditions:
 - a. baseline testing may be conducted with the emission control strategy in place, provided the test sample is taken upstream of the emission control strategy;
 - b. control strategy testing shall be performed on the commercial harbor craft engine with full implementation of the emission control strategy;

DRAFT
Do Not Cite or Quote

- c. the percent change from baseline shall be calculated as the baseline emissions minus control strategy emissions, with the difference being divided by the baseline emissions and the result expressed as a percentage;
 - d. the same test method described in subsection (k) shall be used for determining both baseline emissions and control strategy emissions; and
 - e. diesel PM, NO_x, CO, HC, NMHC, and CO₂ testing shall be done in accordance with the method in International Organization for Standardization (ISO) 8178 Test procedures: ISO 8178-2: 1996(E) ("ISO 8178 Part 2"); or ISO 8178-4: 1996(E) ("ISO 8178 Part 4"), which are incorporated herein by reference.
- (B) The application for extension must include the following: explanation demonstrating that the highest level VDECS are not feasible for the specific equipment or application (if applicable), identification of each engine (serial number, engine manufacturer, model year, family, and series), description of the emission control system to be demonstrated, emissions data required in (A) above, the contact information for the emission control system supplier, and a letter of intent from the supplier that they intend to apply for verification of the experimental system;
- (C) The owner or operator must bring the commercial harbor craft into compliance within six months of the end of the compliance extension period;
- (D) If VDECS are available, or become available during the extension period, and are determined to be feasible for the specific engine and equipment type, the owner or operator must demonstrate that the experimental control achieves equivalent to or better than a Level 1 VDECS; and
- (6) *Compliance Extension for Equipment Manufacturer Delays and Installation Difficulties.* An owner or operator who has purchased new equipment in order to comply with subsection (e), including an owner or operator who has been granted a compliance extension per subsections (f)(2) or (f)(3) will be considered to be in compliance if the new equipment has not been received due to manufacturing delays or if the installer encounters excessive difficulties, as long as the following conditions are met:
- (A) The equipment was purchased, or the owner or operator and seller had entered into contractual agreement for the purchase, at least six months prior to the required compliance date as specified in subsection (e); and
 - (B) Proof of purchase, such as a purchase order or signed contract for the sale, including engine and / or VDECS specifications for each applicable commercial harbor craft, must be maintained by the owner or operator and provided to an agent or employee of ARB upon request.

DRAFT
Do Not Cite or Quote

(g) *Diesel Emission Control Strategy Special Circumstances*

An owner or operator shall maintain the original level of the elected Compliance Option for each engine once that engine is required to be in compliance, except under specified special circumstances as follows:

- (1) In the event of a failure or damage of a diesel emission control strategy, the following conditions apply:
 - (A) Failure or Damage during the Warranty Period. If a diesel emission control strategy fails or is damaged within its warranty period and the diesel emission control strategy manufacturer or authorized dealer determines it cannot be repaired, the owner or operator shall replace the diesel emission control strategy with either the same level diesel emission control strategy or another approved Compliance Option as defined in subsection (e) within 90 days of diesel emission control strategy failure.
 - (B) Failure or Damage Outside of Warranty Period. If a diesel emission control strategy fails or is damaged outside of its warranty period, and it cannot be repaired, the owner or operator shall apply a Compliance Option within 90 days, as defined in subsection (e).

(h) *Alternative Compliance Plan.*

- (1) Requirements.
 - (A) The purpose of this subsection is to allow any person (“person” or “applicant”) the option of complying with the requirements of this subsection (h) in lieu of the requirements of subsection (e). Under this subsection (h), alternative emission control strategies (AECS) can be implemented as an alternative compliance plan (ACP), provided they result no greater emission, expressed in pounds, of diesel PM and NO_x from the engines over the applicable calendar year, relative to the emissions that would have occurred under subsection (e).
 - (B) An applicant wishing to participate in an ACP may include one or more commercial harbor craft in the ACP, but the applicant shall only include commercial harbor craft that the person owns or operates under their direct control. For purposes of this subsection, “direct control” shall include, but not be limited to, commercial harbor craft for which the applicant has a contract, lease, or other arrangement with a third-party for the third-party to operate the commercial harbor craft.
 - (C) No commercial harbor craft shall be included in more than one ACP plan.

DRAFT
Do Not Cite or Quote

- (D) Commercial harbor craft included in an ACP must continue to be included in the ACP for the duration of the ACP.
- (E) AECS may include, but are not limited to:
 - 1. engine modifications
 - 2. exhaust treatment control
 - 3. engine repower
 - 4. use of alternative fuels or fuel additives
 - 5. shore-side power
 - 6. fleet averaging
- (F) The ACP application demonstrating compliance with this subsection shall contain, at a minimum, the following information:
 - 1. the company name, address, and contact information;
 - 2. the commercial harbor craft and engine(s) subject to the ACP, including engine make, model, and serial numbers, and other information that uniquely identify the engine;
 - 3. documentation, calculations, emissions test data, or other information that establishes the diesel PM and NO_x reductions, expressed in pounds, will be equivalent to or greater than the emission reductions that would have been achieved upon compliance with under subsection (e);
 - 4. the proposed recordkeeping, reporting, monitoring, and testing procedures that the applicant plans to use to demonstrate continued compliance with the ACP.
- (G) Emission reduction calculations demonstrating equivalence with the requirements of subsection (e) shall only include diesel PM and NO_x emissions from commercial harbor craft that operate in the California region, per air district, or another geographic area provided approved by the Executive Officer to which the ACP applies.
- (H) Any owner or operator subject to an approved ACP shall maintain operating records in a manner and form as specified by the Executive Officer in the approved ACP. Required records may include, but are not limited to, information on hours of operation, fuel usage, maintenance procedures, and emissions test results. Such records and reports shall be retained for a period of not less than three (3) years and shall be submitted to the Executive Officer in the manner specified in the approved ACP and upon request by the Executive Officer.
- (I) Emission reductions included in an ACP shall not include reductions that are otherwise required by any local, State, or federal rule, regulation, or

DRAFT
Do Not Cite or Quote

statute, or that are achieved or estimated from equipment not located in the region to which the ACP applies.

- (J) No person may operate any commercial harbor craft under an ACP unless the applicant has first been notified in writing by the Executive Officer that the ACP application has been approved. Prior to such approval, applicants shall comply with the provisions of this section, including the requirements in subsection (e).

(2) Application Process.

- (A) Applications for an ACP shall be submitted in writing to the Executive Officer for evaluation.
- (B) The Executive Officer shall establish an internet site ("ACP internet site") in which all documents pertaining to an ACP application will be made available for public review. The Executive Officer shall also provide a copy of all such documents to each person who has requested copies of the documents; these persons shall be treated as interested parties. The Executive Officer shall provide two separate public comment periods during the ACP Application process, as specified in this subsection (h)(2).

(C) Completeness Determination.

Within 15 days after receiving an ACP application, the Executive Officer shall notify the applicant whether the application is deemed sufficiently complete to proceed with further evaluation. If the application is deemed incomplete, the notification shall identify the application's deficiencies. The Executive Officer shall have an additional 15-day period for reviewing each set of documents or information submitted in response to an incomplete determination. Nothing in this subsection prohibits the Executive Officer from requesting additional information from the applicant, during any part of the ACP application process, which the Executive Officer determines is necessary to evaluate the application.

(D) Notice of Completeness and 30-Day First Public Comment Period.

After an ACP application has been deemed complete, the Executive Officer shall provide a 30-day public comment period to receive comments on any element of the ACP application and whether the Executive Officer should approve or disapprove the ACP application based on the contents and merits of the application. The Executive Officer shall notify all interested parties of the following:

1. the applicant(s);
2. the start and end dates for the 30-day first comment period; and

DRAFT
Do Not Cite or Quote

3. the address of the ACP internet site where the application is posted.

The Executive Officer shall also make this notification available for public review on the ACP internet site.

(E) Proposed Action and 15-Day Second Public Comment Period.

Within 30 days after the first public comment period ends, the Executive Officer shall notify the applicant and all interested parties of ARB's proposed approval or disapproval. This notification shall propose to approve the application as submitted, disapprove the application, or approve the ACP application with modifications as deemed necessary by the Executive Officer. The notification shall identify the start and end dates for the 15-day second public comment period. During the second public comment period, any person may comment on the Executive Officer's proposed approval or disapproval of the ACP application and any element of the application. The Executive Officer shall also make this notification available for public review on the ACP internet site.

(F) Final Action.

Within 15 days after the second public comment period ends, the Executive Officer shall take final action to either approve or deny an ACP application and shall notify the applicant accordingly. If the application is denied or modified, the Executive Officer shall state the reasons for the denial or modification in the notification. The notification to the applicant and approved ACP plan, if applicable, shall be made available to the public on the ACP internet site. In addition, the Executive Officer shall consider and address all comments received during the first and second public comment periods, and provide responses to each comment on the ACP internet site.

(G) Notification to the Executive Officer of Changes to An Approved ACP.

The applicant shall notify the Executive Officer in writing within 30 days upon learning of any information that would alter the emissions estimates submitted during any part of the ACP application process. If the Executive Officer has reason to believe that an approved ACP has been granted to a person that no longer meets the criteria for an ACP, the Executive Officer may, pursuant to subsection (h)(3) below, modify or revoke the ACP as necessary to assure that the applicant and subject vessel(s) will meet the emission reduction requirements in this section.

(3) Revocation or Modification of Approved ACPs.

DRAFT
Do Not Cite or Quote

With 30-days notice to the ACP holder, the Executive Officer may revoke or modify, as needed, an approved ACP if there have been multiple violations of the ACP provisions or the requirements of the approved ACP plan; or if the Executive Officer has reason to believe that an approved ACP has been granted that no longer meets the criteria or requirements for an ACP or the applicant can no longer comply with the requirements of the approved ACP in its current form. Public notification of a revocation or modification of an approved ACP shall be made available on the ACP internet site.

(i) *Recordkeeping Requirements.*

Beginning January 1, 2008, an owner or operator of commercial harbor craft shall maintain the following records or copies of records. The owner or operator shall provide the following records for inspection to an agent or employee of ARB upon request for all commercial harbor craft subject to compliance with the regulation:

- (1) Owner or Operator Contact Information
 - (A) Company name
 - (B) Contact name, phone number, address, e-mail address
 - (C) Address where vessel is registered
- (2) Commercial Harbor Craft Name
- (3) Engine Information
 - (A) Make of engine
 - (B) Model of engine
 - (C) Engine family (if applicable)
 - (D) Engine serial number
 - (E) Year of manufacture of engine (if unable to determine, approximate age)
 - (F) Rated brake horsepower
 - (G) Displacement
 - (H) Control equipment (if applicable)
 - a. Type of diesel emission control strategy
 - b. Serial number of installed diesel emission control strategy
 - c. Manufacturer of installed diesel emission control strategy
 - d. Model of installed diesel emission control strategy
 - e. Installation date of installed diesel emission control strategy
 - f. Level of control (1, 2, or 3)
- (4) Records of maintenance for each installed diesel emission control strategy
- (5) Operation Information
 1. Describe general use of engine
 2. Typical load (percent of maximum bhp rating)
 3. Typical annual hours of operation, based upon readings of the non-re-settable hour meters.

DRAFT
Do Not Cite or Quote

4. Location and hours of operation in each location
 5. If seasonal, months of year operated and typical hours per month operated
-
- (6) For each engine for which an owner or operator is claiming an exemption pursuant to paragraph (f)(1), the retirement date correlated to the information in subsections (i)(1) through (i)(5) above
 - (7) For each engine for which an owner or operator is claiming an extension pursuant to paragraph (f)(3), the records of the test plan, including start and end dates of the experiment; diesel particulate matter emission control strategy manufacturer name and contact information (representative, address, and phone number); name and type of experimental diesel particulate matter emission control strategy; and targeted data to be generated by experiment, correlated to the information in subsections (i)(1) through (i)(5) above
 - (8) For each engine for which an owner or operator is claiming an extension pursuant to paragraph (f)(4), the purchase order or signed contract between the owner or operator and seller of the new equipment that has been purchased in order to comply with subsection (e).
 - (9) For each engine replaced an owner or operator is claiming replaced provide documentation that the engine has been destroyed.
 - (j) *Reporting Requirements.*
 - (1) Compliance Plan. By January 1, 2008, each owner or operator of new or in-use commercial harbor craft subject to the requirements of subsection (e) shall provide the following information to the Executive Officer:
 - (A) Information listed in subsections (i)(1) through (i)(5), and
 - (B) An identification of the planned control strategy (Compliance Plan) for each engine and commercial harbor craft listed in subsections (i)(1) through (i)(5) that, when implemented, will result in compliance with subsection (e). If applicable, the information should include the Executive Order number issued by the Executive Officer for a VDECS that has been approved by the Executive Officer through the Verification Procedure. The Compliance Plan is not binding and can be changed by the owner or operator prior to the required compliance date(s).
 - (2) Demonstration of Compliance. By no later than each applicable compliance date specified in subsection (e) the owner or operator of an in-use commercial harbor craft subject to the requirements of subsection (e) shall provide the following information to the Executive Officer:

DRAFT
Do Not Cite or Quote

- (A) Information listed in subsections (i)(1) through (i)(5); and
 - (B) An identification of the control strategy implemented and implementation date for each engine in accordance with the requirements of subsection (e) for purposes of demonstrating compliance.
- (3) Reporting for low use auxiliary and propulsion engines. Each owner or operator to whom subsection (c)(2) applies, shall submit a report to the Executive Officer by January 1, 2008 and annually, by January 31 thereafter, as described below:
- (A) Owner or Operator Contact Information
 - (D) Company name
 - (E) Contact name, phone number, address, e-mail address
 - (F) Address where vessel is registered
 - (B) Vessel and Engine Information
 - (1) Vessel name or identification
 - (2) Make of engine
 - (3) Model of engine
 - (4) Engine family (if applicable)
 - (5) Engine serial number
 - (6) Year of manufacture of commercial harbor craft and engine (if unable to determine, approximate age)
 - (7) Engine rated brake horsepower
 - (8) Engine displacement
 - (9) Control equipment (if applicable)
 - a. Type of diesel emission control strategy
 - b. Serial number of installed diesel emission control strategy
 - c. Manufacturer of installed diesel emission control strategy
 - d. Model of installed diesel emission control strategy
 - e. Installation date of installed diesel emission control strategy
 - f. Level of control (1, 2, or 3)
 - (C) Operation Information
 - (1) Describe general use of engine
 - (2) Typical load (percent of maximum bhp rating)
 - (3) Typical annual hours of operation
 - (4) Location and hours of operation in each location
 - (5) If seasonal, months of year operated and typical hours per month operated
- (4) Reporting for change of hours of operation category, new or change of ownership of vessel(s) or engine(s).
- (A) Owner or operator shall submit a report to the Executive Officer within 30 days of change of hours of operation category, purchase, lease, rental, or

DRAFT
Do Not Cite or Quote

change of ownership of vessel or engine, as described in subsection (i)(1) through (i)(5).

- (B) Within 90 days of change of hours of operation category, purchase, lease, rental, or change of ownership or the earliest applicable compliance date, whichever is later, owner or operator shall submit a report to the Executive Officer describing the compliance plan, as described in subsection (j)(1).
- (C) Owner or operator shall submit a report to the Executive Officer demonstrating compliance, as described in subsection (j)(2) by the earliest applicable compliance date. If date of transaction, change of ownership, or change of hours of operation category is less than 6 months from earliest compliance date or after the earliest compliance date, owner or operator shall submit a report to the Executive Officer demonstrating compliance, as described in subsection (j)(2) within 6 months of change of hours of operation category, purchase, lease, rental, or change of ownership. If the vessel is in compliance with the provisions of this regulation, previously submitted documentation may be resubmitted with updated information.

(k) *Test Method.*

[IMO or ISO test method reference or replication along with reporting requirements for using Performance Standard option]

(l) *Additional Reference Methods*

- (1) Manufactures Certification
- (2) Certification Values

[NEEDS FURTHER REVIEW]

(m) *Right of Entry.*

An agent or employee of the Air Resources Board has the right of entry to board any commercial harbor craft for the purpose of inspecting propulsion and auxiliary engines and emission control strategies and their records to determine compliance with this regulation.

(n) *Severability.*

If any subsection, paragraph, subparagraph, sentence, clause, phrase, or portion of this regulation is, for any reason, held invalid, unconstitutional, or unenforceable by any court of competent jurisdiction, such portion shall be deemed as a separate, distinct, and independent provision, and such holding shall not affect the validity of the remaining portions of the regulation.

(o) *Submittal of Documents.*

DRAFT
Do Not Cite or Quote

- (A) All documents required under this regulation to be submitted to the Executive Officer shall be submitted as follows:

California Air Resources Board
Stationary Source Division, Commercial Harbor Craft
P.O. Box 2815
Sacramento, California 95812-2815

- (B) An alternative method, including electronic submittals, may be approved by the Executive Officer.

NOTE: Authority cited: sections 39600, 39601, 39618, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 43013, 43018, California Health and Safety Code. Reference: sections 39618, 39650, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 40717.9, 43013, and 43